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Relation between loneliness and behavioural disclosure : potential mediators and moderators

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Running head: LONELINESS AND DISCLOSURE

**The Relation Between Loneliness and Behavioural Disclosure:
Potential Mediators and Moderators**

**Submitted in partial fulfilment of the requirements for the degree of
Master of Arts, Clinical Psychology**

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November, 1999

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Abstract

The purpose of the research was to examine the relation between loneliness and behavioural disclosure, gender differences in the relation, as well as the potential mediators of that relation (i.e., norm violation, trust, and rejection sensitivity). Participants were 136 undergraduates enrolled in Introductory Psychology (68 dyads including both same-sex and opposite-sex pairs), who were engaged in dyadic conversations in a laboratory. Participants selected 6 topics each from a list of topics varying in level of intimacy, and disclosed to their partner for 2 minutes per topic. Intimacy levels of disclosure were rated. Following the interaction, the students were administered the UCLA Loneliness Scale, an emotional trust scale (Johnson-George & Swap, 1982), a generalized trust scale (Rotter, 1967), and the Rejection Sensitivity Scale (Feldman & Downey, 1994). As expected there were gender differences in behavioural disclosure, in which females provided more intimate disclosures than did males. The relation between loneliness and disclosure was also found to be stronger in females. Furthermore, there was evidence to indicate that dyadic effects in disclosure were present. The findings yielded by Solano et al. (1982) were replicated in the current study but only partly. Loneliness was positively correlated with the intimacy of disclosure during the first exchange, but that was not qualified by gender of partner. Also, loneliness was negatively correlated with disclosure during the course of the conversations both at the individual and dyadic level (the first speaker only). As anticipated, loneliness was negatively correlated with the measures of trust and positively correlated with rejection sensitivity, but neither of them were, however, correlated with behavioural disclosure.

Thus, neither trust nor rejection sensitivity were found to mediate the loneliness-disclosure relation. The findings also indicated that the lonely individuals' norm violated disclosure during the first exchange was not a mediator of the loneliness-disclosure relation. The potential for other factors to serve as mediators was discussed.

Table of Contents

	Page No.
Introduction.....	1
Conceptualization and Measurement of Loneliness.....	1
Psychosocial Problems Associated with Loneliness.....	2
Disclosure and Loneliness.....	2
Self-Reported Disclosure.....	3
Behavioural Disclosure.....	4
Gender Differences in Disclosure Processes.....	7
Gender Differences in the Relation Between Loneliness and Disclosure.....	9
Potential Mediators.....	10
Loneliness and Norm Violation.....	11
Loneliness and Trust.....	12
Loneliness and Rejection Sensitivity.....	14
Overview of the Study and the Hypotheses.....	16
Norm Violation.....	17
Trust.....	18
Rejection Sensitivity.....	18
Method.....	19
Participants.....	19
Qualities of the Sample.....	19
Measures.....	19

Loneliness.....	19
Interpersonal Trust: Emotional.....	20
Interpersonal Trust: Generalized.....	20
Rejection Sensitivity.....	20
Procedure.....	21
Coding of Behavioural Disclosure.....	22
Results.....	23
Relation Between Intimacy of Topic Choice and Intimacy of Disclosure..	23
Qualities of the Scales and Measures	23
Correlations Among the Scales Across Dyad.....	24
Correlations Among the Measures Within Dyad.....	24
Gender Differences in the Loneliness-Disclosure Relation.....	26
Gender as a Moderator of the Relation Between Loneliness and	
Disclosure During the Remainder of the Conversation.....	26
The Contribution of Gender and Pairing to Dyadic Disclosure.....	26
Norm Violation, Trust, and Rejection Sensitivity as Mediators.....	27
Discussion.....	28
Reciprocity.....	28
Solano et al. (1982) Hypotheses.....	28
Gender Differences.....	31
Mediator Hypotheses.....	32
Norm Violation.....	32

Trust.....	33
Rejection Sensitivity.....	34
Are There Mediators of the Relation Between Loneliness and Disclosure?.....	35
References.....	37
Table 1.....	45
Table 2.....	46
Table 3.....	47
Table 4.....	48
Appendix A - Participation Consent Form.....	49
Appendix B - The UCLA Loneliness Scale.....	52
Appendix C - The Emotional Trust Subscale of Johnson-George and Swap's (1982) Specific Interpersonal Trust Scale (Per Target).....	54
Appendix D - Rotter's (1967) Interpersonal Trust Scale.....	61
Appendix E - Downey and Feldman's (1996) Rejection Sensitivity Scale.....	68
Appendix F - Rating Scale.....	75
Appendix G - Disclosure Topics.....	77
Appendix H - Strassberg and Anchor's (1975) Index of Intimacy of Disclosure...	81

Introduction

Over the past few decades researchers have begun the task of understanding the complex phenomenon of loneliness (McWhirter, 1990; Rubenstein, Shaver, & Peplau, 1979; Solano, Batten, & Parish, 1982; Weiss, 1973). Numerous researchers have attempted to identify the causes and consequences of this distressing, sometimes debilitating problem (Jones, Freemon, & Goswick, 1981; Loucks, 1980; Rotenberg, 1994; Russell, Peplau, & Ferguson, 1978). The majority of studies indicate that loneliness is associated with low personal disclosure when it is assessed by self-report (Chelune, Sultan, & Williams, 1980; Jones, 1981; Rotenberg, 1994; Solano et al., 1982). There is some modest evidence to suggest, however, that the relation between loneliness and personal disclosure is different when disclosure is assessed behaviourally (i.e., Solano et al., 1982). There are a number of limitations with the research on the link between loneliness and behavioural disclosure, however, that need to be addressed before definitive conclusions can be drawn. The purpose of the present research was to examine: (a) the relation between loneliness and behavioural disclosure with the limitations of the previous research rectified, (b) gender differences in that relation, and (c) whether that relation is mediated by norm violation, interpersonal trust, and rejection sensitivity.

Conceptualization and Measurement of Loneliness

The central theme of various definitions of loneliness is that it corresponds to the individual's perception that the quantity or quality of their interpersonal relationships is not satisfying or not at the desired level (Chelune, Sultan, & Williams, 1980; Franzoi & Davis, 1985; Solano et al., 1982; Stokes, 1987). Loneliness has been most frequently

assessed by versions of the UCLA Loneliness Scale (see Russell, Peplau, & Cultrona, 1980; Russell, 1996).

Psychosocial Problems Associated with Loneliness

Using the UCLA Loneliness Scale and similar measures, researchers have found that loneliness is associated with a variety of social problems. For example, loneliness has been found to be associated with alcoholism (Sadava & Pak, 1994; Sadava & Thompson, 1987), obesity (Schumaker, Krejci, & Small, 1985), suicide (Weber, Mathe, & Nolsen, 1997), and depression (Anderson & Harvey, 1988; Bragg, 1979; Russell et al., 1978). Loneliness has also been associated with several personality variables, such as tendencies to be pessimistic, cynical, and to harbor negative attitudes towards others (Jones et al., 1981); introversion (Hojat, 1982; Jones et al., 1981; Russell et al., 1980); low assertiveness (Brennan, 1982; Jones et al., 1981); and low self-esteem (Goswick & Jones, 1981; Jones et al., 1981; Wittenberg & Reis, 1986). Other researchers have found evidence to suggest that, in contrast to nonlonely persons, lonely individuals demonstrate inappropriate social skills or a lack of social skills (Jones, 1981; Leaper, Carson, Baker, Holliday, & Myers, 1995), and display a tendency to be overly sensitive, often perceiving malicious intent or criticism when none is intended (Stokes, 1987; Jones et al., 1981). This lack of social skills and over-sensitivity may lead to fewer and less intimate relationships (Hoover, Skuja, & Cospers, 1979; Russell et al., 1980).

Disclosure and Loneliness

The definition of self-disclosure is the act of an individual revealing personal information, such as one's thoughts and feelings, to another person. The notion that

disclosure is necessary for the development of interpersonal intimacy has a long history in the field of social psychology (Altman & Taylor, 1973; Camarena, Sarigiani, & Peterson, 1990; Jourard, 1971) and may be viewed as self-evident. Various authors have proposed that lonely individuals are inclined to disclose low intimate/personal information to others and that this may cause or maintain their loneliness by inhibiting the formation or development of close relationships (Stokes, 1987).

Self-Reported Disclosure. A number of studies (Berg & Peplau, 1982; Davis, 1976; Davis & Franzoi, 1986; Mahon, 1982; Sloan & Solano, 1984; Solano et al., 1982; Stokes, 1985) have yielded a negative relation between loneliness and disclosure when assessed by self-report. In a study by Stokes (1987), college students were administered Miller, Berg, and Archer's (1983) 10 topics as a measure of the intimacy of disclosure index and the revised UCLA Loneliness Scale short form. The results indicated that loneliness was associated with low intimacy of disclosure. Several other studies have also found this pattern of a relation between loneliness and disclosure using self-report (Hamid, 1989; Schwab, Scalise, Ginter, & Whipple, 1998), and the relation has been found to extend to a variety of different populations such as married students (leRoux & deBeer, 1994) and adolescents (Vernberg, Ewell, Beery, Freeman, & Abwender, 1995). The results yielded by these studies confirm the expectation that loneliness is associated with low intimate disclosure. Stokes (1987) and other authors (i.e., Rotenberg, 1994) have argued that lonely individuals' low personal disclosure serves to cause and/or maintain their less than desired social relationships and thus their loneliness.

Behavioural Disclosure. There are some limitations with assessing disclosure by

self-report, particularly regarding the relation between loneliness and disclosure. In the assessment of disclosure, individuals are traditionally asked "What have you disclosed?" or "What would you be willing to disclose?" (Stokes, 1987). Research indicates that such reports are poor predictors of disclosing behaviour (Cozby, 1973). Also, as noted, lonely individuals have negative perceptions of themselves and others and it is possible that this is responsible for the relation between loneliness and self-reported disclosure (i.e., lonely individuals negatively evaluate the intimacy of their conversations with others). For these reasons, researchers need to examine the relation between loneliness and behavioural disclosure.

Few studies to date have addressed this issue. In one such study by Solano et al. (1982), college students were administered the revised UCLA loneliness scale. Individuals one standard deviation (SD) above the mean (lonely) and one SD below the mean (nonlonely) were engaged in dyadic conversations on topics varying in intimacy. The dyads were constructed such that they were composed of a lonely participant and a nonlonely participant or two nonlonely participants that were either same-sex or opposite-sex. Each participant in the dyad rated how well he or she knew his or her partner prior to, and after, the conversation. The dyadic conversations were carried out such that the participants took turns choosing a topic from a list of topics varying in intimacy and discussed it for one minute. Each partner in the dyad chose twelve topics to disclose. The results revealed the following. During the initial exchange of disclosure, lonely participants chose to disclose high intimacy topics to same-sex peers and chose to disclose low intimate topics to opposite-sex peers. The opposite pattern was shown by

nonlonely participants. Across the exchanges, lonely individuals chose to disclose a low level of intimacy to opposite-sex peers, thus indicating a negative relation between loneliness and level of intimacy of disclosure. In a study by Sloan and Solano (1984), it was found that lonely participants disclosed less intimately to same-sex peers and strangers. However, only males were included in this study, and scoring for intimacy of disclosure was based on the type of conversational mode employed, such as attentiveness and acquiescence, instead of rating the actual intimacy level of each disclosure or utterance .

There are two limitations with Solano et al.'s (1982) study that warrant consideration. First, the measure of behavioural disclosure in Solano et al.'s (1982) study was the intimacy of the topic chosen by the participant for them to disclose. Although there is likely a correspondence between intimacy of topic choice to the intimacy of actual disclosure, it is possible that individuals may stray from the topic they chose. In a study by Rotenberg and Whitney (1992), actual disclosures were coded for level of intimacy when investigating the relation between loneliness and disclosure in a sample of preadolescents. The patterns found for the preadolescents were similar to Solano et al.'s (1982) findings when collapsing the findings across gender, such that lonely participants disclosed less intimately to opposite-sex partners. However, slight differences were observed between these two studies when gender was examined separately. More specifically, the initial disclosure was not found to be too high in intimacy to same-sex partners for the lonely group of adolescents, whereas this pattern was detected in the adult lonely group. It is yet to be determined whether the results from Solano et al's (1982)

study can be replicated using actual coding of disclosure intimacy, and whether the differences between preadolescents and adults continues to persist.

Second, Solano et al. (1982) focused on the relation between loneliness and intimacy of disclosure at the individual level. However, since the relationship in question is based on a dyadic interaction, dyadic effects must also be taken into consideration. In this vein, researchers have demonstrated that there are strong dyadic (reciprocal) effects in the exchange of disclosures; intimacy of disclosure by one partner in a dyad is reciprocated by the other. The reciprocity of disclosures is evident primarily when the participants are strangers rather than friends (Derlega, Wilson, & Chaikin, 1976). Reciprocity effects of self disclosure in dyads have been studied and observed extensively (Derlega et al., 1976; Rotenberg & Whitney, 1992; Rubin, 1975). Specifically, it is perceived as a norm by society to reciprocate the level of intimacy of disclosure from a partner in order to develop relationships. In support of this assumed norm, individuals that reciprocate their partners' intimacy level of disclosure or give more intimate disclosures are more positively evaluated, whereas respondents that do not reciprocate level of disclosure are perceived of as colder, more psychologically maladjusted, and less desirable as a friend (Chaikin & Derlega, 1974; Rubin, 1975). Research indicates that all dyadic interactions are unique since varying degrees of interdependence occurs between partners of a dyad (Derlega et al., 1976). As a result of varying levels of interdependence among dyads, some researchers have subjected individual patterns to analysis whereas other researchers have subjected the dyad to analysis. Recently, Griffin and Gonzalez (1995) have argued that the proportion of interdependence between dyadic partners must

be accounted for when observing variables that are present within a dyadic interaction. This is necessary to consider since similarities between the partners may lead to redundant scores in the overall analysis, inflating the final overall correlation. At the very least, the arguments advanced by Griffin and Gonzalez (1995) highlight the importance of examining the relation between loneliness and behavioural disclosure both at an individual level and a dyadic level, thus the following study will observe relations at both of these levels.

In effect, it remains to be shown that there are relations between loneliness and directly observed behavioural disclosure in adults. The two limitations described were addressed in the present study to determine if Solano et al.'s (1982) findings would be replicated using actual disclosure.

Gender Differences in Disclosure Processes

Gender differences on how individuals disclose to others in a dyadic interaction has been well documented in disclosure research (Aries, 1987; Dindia & Allen, 1992; Leaper et al., 1995). Dindia and Allen (1992) performed a meta-analysis of 205 research studies on this relation in order to investigate which gender differences would emerge. A trend in the findings indicated that women chose to disclose more personal information to their partners, as compared to men, although the effect size was not very strong ($d = .18$). However, the effect size was strengthened when the sex of the partner (receiver of disclosures) was a female ($d = .35$) as opposed to a male ($d = .00$). Thus, considering the gender of the target listener may be necessary when investigating gender differences in disclosures, and may act as a moderator for the relation between gender of the speaker

and level of intimacy of disclosures. According to these findings, two women in an interaction are more willing to disclose to each other when compared to an interaction between two men, or a man and a woman. It has been observed that women even report feeling more satisfied and competent when disclosing to a same-sex friend than to an opposite-sex friend as compared to males (Buhrmester, Furman, Wittenberg, & Reis, 1988).

Several hypotheses have been postulated to account for these gender differences. For instance, Aries (1987) has suggested that men may be less likely to disclose intimate information with other males because they believe they may be perceived of as weak. The way in which males respond to disclosures (i.e., provide supportive behaviours or reciprocate disclosure) may affect how others disclose to them. For example, Aries (1987) hypothesized that males may avoid intimacy and not reciprocate or support disclosures from their partners because they do not receive it from their male friends. Women may also disclose less to men according to this hypothesis, since they expect that men will not support or reciprocate intimate disclosures. On the other hand, men may be more comfortable disclosing to women because they anticipate that women are more likely to support their disclosures (Leaper et al., 1995), and also the males may not be as concerned with looking weak in the presence of a woman. To support this claim, Buhrmester et al. (1988) report that females and males were found to be more satisfied with highly intimate conversations with a female than a male partner.

Although gender differences are evident in how individuals choose to self-disclose personal information to others, Dindia and Allen (1992) found that gender

differences are more evident when studying interactions of friends ($d = .28$) rather than strangers ($d = .07$).

Gender Differences in the Relation Between Loneliness and Disclosure

A number of studies indicate that there are gender differences in the relation between loneliness and self-reported disclosure. The studies indicate that the relation between loneliness and self-reported disclosure is stronger in females than in males (Berg & Peplau, 1982; Franzoi & Davis, 1985; Solano et al., 1982; Stokes, 1987). For example, Solano et al. (1982) found that when friends were targets of self-disclosure, females tended to show a stronger relation between loneliness and self-disclosure than did males. Berg and Peplau (1982) assessed disclosure from the Self-Disclosure Situation Survey (SDSS) and found that loneliness was correlated with scores on the SDSS for females but not for males. Rotenberg and Whitney (1992) found lonely preadolescent boys disclosed less intimately to females, while lonely girls disclosed more intimately with females when compared to nonlonely females. The lonely group disclosed less intimately to opposite-sex partners as compared to same-sex partners. Solano et al.'s. (1982) study replicates this last pattern of disclosure in lonely adults.

Researchers have advanced hypotheses to account for the gender differences in the relation between loneliness and disclosure. Stokes (1987), for example, argued the differences may be attributed to differences between male and female social network variables. Male friendships tend to be more group-oriented than those of females. They associate with other males that have common interests, and the intimacy level is low. In contrast, female friendships are more likely than males to comprise dyadic relationships

which are characterized by the exchange of intimacies (Bell, 1981). It would not be surprising then for females' loneliness to be more closely tied to low intimate disclosure than that of loneliness in males.

At present, with the exception of a few studies, including Solano et al.'s (1982) and Rotenberg and Whitney's (1992) studies, researchers have examined the relation between loneliness and disclosure only when it was assessed by self-report. It is possible that there are gender differences in the willingness to report intimate disclosure and that may affect the strength of the observed loneliness-disclosure relation. For example, males may not be inclined to report providing intimate disclosure (because it is contrary to the male stereotype) and the resulting low level of intimate disclosure may attenuate the relations between loneliness and disclosure for them. It remains to be examined whether there are gender differences in the relation between loneliness and disclosure for adults when it is assessed behaviourally. As noted, Solano et al. (1982) employed topic choice by participant to indicate the intimacy level of disclosure, and Rotenberg and Whitney's (1992) study was reflective of preadolescent patterns which may or may not replicate those which are found in adults. The present study attempted to determine whether these gender differences were present when coding actual disclosures as opposed to coding the topic chosen.

Potential Mediators

Several researchers are interested in determining what is responsible for the relationship between loneliness and disclosure, or more specifically what mediates this relationship (Jones et al., 1981; Solano et al., 1982; Stokes, 1987). Based on the research,

it appears that there are three sets of variables that likely serve as mediators of the loneliness-disclosure relation: norm violation, interpersonal trust, and rejection sensitivity.

Loneliness and norm violation. In the study by Solano et al. (1982), lonely individuals tended to disclose more intimately when talking to same-sex partners during initial disclosures while they disclosed less intimately to opposite-sex peers when compared to nonlonely individuals. A behavioural mediation is implied by Solano et al.'s (1982) hypothesis. They proposed that lonely individuals' tendencies to provide intimate disclosure that was too great to same-sex peers and too little to opposite-sex peers violated norms which, in turn, were responsible for subsequent low intimate disclosure to others. Consequently, the atypical pattern of disclosure by lonely individuals should disrupt the conventional reciprocity found in the exchange of disclosures and thus serve as a mediator of the relation between loneliness and behavioural disclosure. Three predictions can be derived from Solano et al.'s (1982) hypothesis. First, because lonely individuals violate norms when disclosing on the first trial, the loneliness primarily of the first speaker should be predictive of low intimate disclosure during the remainder of the conversations. Second, because lonely individuals violate norms when disclosing on the first trial, their dyadic partners may not be inclined to reciprocate disclosure in a subsequent (next) trial. Third, the atypical patterns of disclosure by lonely individuals during the first trial should be responsible for (mediate) the relation between loneliness and subsequent disclosure.

Loneliness and trust. Interpersonal trust is a likely mediator between loneliness

and disclosure because research documents that interpersonal trust is associated with disclosure (Johnson-George & Swap, 1982) and loneliness is associated with low interpersonal trust (Jones, Freeman, & Goswick, 1981; Paloutzian & Ellison, 1982; Rotenberg, 1994). In a study by Jones et al. (1981), students were administered the revised UCLA loneliness scale and the trust subscale of the Philosophies of Human Nature scale (Wrightsman, 1964). It was found that the results were in the predicted direction such that loneliness had a marginal negative correlation with trust for males ($r(24) = -.10, p < .10$) and for females ($r(27) = -.32, p < .10$) and across gender ($r(53) = -.24, p < .10$). Jones et al. (1981) advanced two hypotheses to account for the findings. First, it was proposed that lonely persons' tendency to be distrusting and have negative person perceptions was the result of their attempts to rationalize their lack of experiencing satisfying relationships (a "rationalized failure" hypothesis). Second, it was proposed that low interpersonal trust of lonely individuals makes them unlikely to initiate social interactions and to respond appropriately to social advances, particularly opposite-sex interactions (an "initiate/response" hypothesis).

Rotenberg (1994) examined the relation between loneliness and multiple facets of interpersonal trust, notably emotional trust (confidence that persons maintain confidentiality and refrain from criticism) and reliability trust (confidence that persons fulfill their word or promise). The first of three studies was designed to examine the relation among loneliness, generalized beliefs in the reliability of others, and trusting behaviour toward unfamiliar others. College students were administered the revised UCLA loneliness scale and Rotter's Interpersonal Trust Scale (Rotter, 1967, 1971, 1980).

Also, the students engaged in the Prisoner's Dilemma (PD) game with a partner who was (unknown to the participants) a confederate; trusting behaviour was inferred from the extent to which the students displayed promised cooperation when their partner reciprocated that behaviour. Loneliness was found to be negatively correlated with generalized trust beliefs in the reliability of others, $r(118) = -.28, p < .01$. Also, it was found that nonlonely individuals demonstrated an increase in trust behaviour across the course of the PD interactions; by contrast, the lonely persons did not display similar increases in trusting behaviour. In effect, nonlonely individuals showed the formation of a behaviourally trusting relationship with their partner whereas lonely individuals did not demonstrate that relationship.

The second study was designed to investigate whether loneliness was associated with individuals' reliability and emotional trust beliefs in their close peer relationships. Students were administered the revised UCLA Loneliness Scale and Johnson-George and Swap's (1982) Specific Interpersonal Trust Scale; the latter assessed individuals' trust beliefs in their same-sex close peers and opposite-sex close peers. It was found that loneliness was negatively correlated with individuals' emotional and reliability trust in close peers, and ratings of trust and quality of the relationships with close peers. In addition, the study indicated that lonely individuals tended to believe that they were not trusted by their close peers. It was found that loneliness was negatively correlated with their ratings of how much they (the individuals) were receptive to disclosures and were socially responsible.

In the third study, participants and their close peers were administered the revised

UCLA loneliness scale, Johnson-George and Swap's (1982) Specific Interpersonal Trust Scale, and the quality of relationship and trusting of relationship scales employed in study 2. As in study 2, it was found that individuals' loneliness was negatively correlated with emotional and reliability trust beliefs in close peers. Nevertheless, close peers' emotional and reliability trust beliefs in the individuals were not appreciably correlated with the individuals' loneliness. In effect, lonely individuals were not less trusted by their close peers than were nonlonely individuals. This latter finding supported the conclusion that lonely individuals' tendency to believe that they were not trusted by their close peers was based on their perceptions, not reality.

Rotenberg (1994) advanced a form of Jones et al.'s (1981) "initiate/response" hypothesis. He proposed that lonely individuals' low trusting behaviour toward unfamiliar others undermined relationship development and limited relationship quality. Furthermore, Rotenberg (1994) hypothesized that interpersonal trust is a mediator between loneliness and disclosure: lonely individual's tendency to distrust others promoted disclosure of low intimate information to them and that, in turn, served to maintain loneliness.

Loneliness and Rejection Sensitivity. Individuals who are rejection sensitive tend to anticipate, perceive, and overreact to any signs of rejection (Downey, Feldman, Jhuri, & Friedman, 1994; Downey & Feldman, 1996). This reaction has been found to be linked to early childhood experiences with parental rejection (Bowlby, 1973, 1980; Feldman & Downey, 1994). The early experiences shape future perceptions, expectations, and reactions to rejection (Downey et al., 1994).

Jones et al. (1981) hypothesized that: (a) loneliness was associated with sensitivity to rejection and, (b) rejection sensitivity may mediate the relation between loneliness and disclosure. Furthermore, the researchers proposed that lonely individuals had a developmental history of rejection (Franzoi & Davis, 1985), coupled with a poor self-regard and that predisposed them to anticipate that their disclosures to others would be rejected by them. Thus, lonely individuals would be less likely to initiate interactions or respond appropriately to social advances, especially from opposite-sex partners. Stokes (1987) extended Jones et al.'s (1981) hypotheses by suggesting lonely individuals do not open themselves up to others due to their anticipation of rejection, and thus do not receive the opportunity to learn about social problems experienced by their peers. This would prohibit them from developing realistic standards for relationships, maintaining their sense of incompetence when interacting in social situations. Furthermore, as a result of the lonely individual anticipating rejection and their high level of negative affectivity, they may not realize or experience the reinforcement of positive reactions by others. It is interesting to note here that, on conceptual grounds, there should be a relation between interpersonal trust and rejection sensitivity. Individuals who are sensitive to rejection should tend to be less trusting in others, specifically less emotionally trusting (i.e., believe that others are less likely to maintain confidentiality and to be critical of disclosures). Rejection sensitivity also takes into consideration anxiety that may be experienced by an individual when communicating to others, which may also inhibit the formation of intimate relationships. Anxiety over a lack of social skills has been found to be positively related to loneliness (Segrin & Kinney, 1995; Solano & Koester, 1989). Self-reported

communication anxiety was not found, however, to mediate the relation between loneliness and self-reported disclosure in a study by Bruch, Kaflowitz, and Pearl (1988), and thus was not considered independently as a possible mediator in the present study.

Overview of the Study and the Hypotheses

First, based on the extensive literature that indicates reciprocity effects are present within dyadic interactions (Derlega, Wilson, & Chaikin, 1976; Rotenberg & Whitney, 1992; Rubin, 1975), it was anticipated that reciprocity effects would be found in the current research, where the correlation between the level of intimacy of disclosures would be positively correlated between the two partners comprising the dyad for the first exchange and throughout the interaction.

Second, the present study explored the relation between loneliness and behavioural disclosure. It was hypothesized that the findings would replicate those found by Solano et al. (1982), such that lonely individuals would initially disclose at a too-high level of intimacy to same-sex partners, while disclosing at a too-low level to opposite-sex partners. For the remainder of the conversation, it was expected that lonely participants would have an overall low level of intimacy of disclosure as compared to the nonlonely group, indicating a negative relation between loneliness and behavioural disclosure. Relations were expected to occur at both the individual and dyadic level. At the dyadic level, it was predicted that the loneliness of the first speaker and the second speaker would be negatively related to the dyadic level of intimacy of disclosure throughout the conversation. The entire range of loneliness scores for the participants were subjected to the analyses as opposed to Solano et al.'s study which included only extreme groups (high

scorers on the UCLA Loneliness scale were considered lonely and low scorers were considered nonlonely).

Third, gender differences were also investigated. Past research indicates that females tend to disclose greater intimate disclosures to their partners as compared to males (Dindia & Allen, 1992). Thus, females were expected to disclose more intimately as compared to males in the present study. Also based on past research, it was expected that the relation between loneliness and disclosure would be stronger in females than in males (Berg & Peplau, 1982; Solano et al., 1982; Stokes, 1987). Gender has also been implicated as a possible moderator in the loneliness-disclosure relation. Solano et al. (1982) and Rotenberg and Whitney (1992) found that lonely participants tended to have an overall lower level of disclosure to opposite-sex peers as compared to same-sex peers. Thus, level of intimacy of disclosure may be affected by the gender of the lonely person's partner. These findings are expected to be replicated in the present study.

Fifth, potential mediators in the relation between loneliness and disclosure were examined.

Norm violation. The three hypotheses derived from Solano et al.'s (1982) predictions concerning norm violation that account for the lonely first speaker initially disclosing high in intimacy to same-sex peers were examined. It was predicted that lonely people violate norms when initially disclosing to others leading to low levels of intimacy from their partner, such that the loneliness of the first speaker should be predictive of a low intimacy level of disclosure during the remainder of the interaction. It was also anticipated that the second speaker in the interaction would not reciprocate the level of

intimacy of the first speaker for the initial exchange, indicating a lack of reciprocity to their lonely partner's initial high disclosure. Finally, it was expected that norm violation for the initial disclosure would mediate the relation between loneliness and the subsequent disclosures.

Trust. The relation between loneliness and disclosure mediated by trust was explored. It was expected that findings would be consistent with Jones et al.'s (1981) and Rotenberg's (1994) proposal that low interpersonal trust causes lonely individuals to avoid initiating social interactions or respond inappropriately during social encounters (initiate/response hypothesis). Thus, trust (i.e., generalized trust in others, trust in male friend, and trust in female friend) would be negatively related to loneliness. Furthermore, it was anticipated that results would support Rotenberg's (1994) hypothesis that low interpersonal trust undermines relationship quality, limits relationship quality for lonely individuals, and thus acts as a mediator between loneliness and disclosure since low trust in others would most likely lead to less intimate disclosures. Thus, trust is also predicted to have a positive relation with intimacy of disclosure in order to be a mediator of the loneliness-disclosure relation. It was also expected that trust would have a negative relation with rejection sensitivity, since it was assumed that individuals sensitive to rejection would be less trusting of others.

Rejection sensitivity. Rejection sensitivity was also investigated as a potential mediator in the loneliness/disclosure relation. Jones et al. (1981) and Stokes (1987) hypothesizes that rejection sensitivity is positively related to loneliness, and that rejection sensitivity may act as a mediator for the relation between loneliness and disclosure were

expected to be supported. Thus, rejection sensitivity was also predicted to be negatively related to intimacy of disclosure in order to be a mediator for the loneliness-disclosure relation.

Method

Participants

The participants were students enrolled in Introductory Psychology classes at Lakehead University. The students received 2 credits toward their course for participating. Participation was contingent on completing the consent form shown in Appendix A.

Qualities of the Sample

The final sample was composed of 51 males and 55 females who were tested as 53 pairs. There were 30 same-sex pairs (14 males and 16 females) and 23 opposite-sex pairs. Fifteen dyads were eliminated from the analyses due to incomplete data. Of the eliminated dyads, 9 were not included due to inaudible or distorted sound on video- and audio-tapes, and 6 were omitted as a result of incomplete questionnaires. Ratings of familiarity within the dyads was low ($M=1.3$), indicating that the individuals in the study were not acquainted with each other. Only two dyads rated each other as high in knowing. The analyses were conducted both with and without these two dyads, and no significant differences were found, thus they were not excluded from the study.

Measures

Loneliness. The revised UCLA Loneliness Scale (Version 3) is a 20-item scale composed of 10 positively worded statements and 10 negatively worded statements about

generalized loneliness (shown in Appendix B). Several studies have utilized the UCLA Loneliness Scale (Version 3) across various populations to assess its validity and reliability, including the elderly (see Russell, 1996). The scale has good reliability with coefficient alpha scores from .89 to .94 across several samples. There is considerable evidence to support the validity of the UCLA Loneliness Scale (Version 3); it has been found to be positively correlated with the NYU Loneliness Scales and the Differential Loneliness Scale and negatively correlated with reports of social support (Russell, 1996).

Interpersonal Trust: Emotional. The emotional trust subscale of The Specific Interpersonal Trust Scale developed by Johnson-George and Swap (1982) was employed. The scale is shown in Appendix C. When completing this scale, individuals placed the initials of the target person in spaces provided in the statements and then rated the extent to which the statement is true. In this case, participants placed the initials of their same-sex friend, opposite-sex friend, mother, father, and romantic partner in the spaces provided. Johnson-George and Swap (1982) provide evidence to support the reliability and validity of the emotional trust subscale.

Interpersonal Trust: Generalized. Rotter's (1967) Interpersonal Trust scale is comprised of 40 items (shown in Appendix D) answered on 5-point Likert scales. The scale has been used extensively over three decades (Rotenberg, 1994; Rotter, 1967, 1971, 1980) and there is considerable evidence to support the reliability and validity of the scale.

Rejection Sensitivity. The Rejection Sensitivity Scale (Downey & Feldman, 1996) is composed of 30 situations designed to assess generalized anxiety concerning

significant others' ability to meet the acceptance needs of the person, and expected likelihood of being rejected by them (shown in Appendix E). Higher rejection sensitivity is demonstrated by higher rated anxiety and higher expected rejection. Research attests to the reliability of the test, with a high test-retest reliability ($r = .83$, $p < .001$), and has yielded support for its validity with a high internal consistency ($\alpha = .83$) for a sample of 321 female and 263 male undergraduate participants (Downey & Feldman, 1996).

Procedure

Initially, students were administered the revised UCLA Loneliness Scale during the Introductory Psychology class. One to two months later, the students were contacted by telephone and asked to participate in a study on "how students get to know each other." Prior to the testing session, the participants were paired because they were to be engaged in dyadic conversations. The pairs were constructed such that there were approximately equal numbers of same-sex female pairs, same-sex male pairs, and opposite-sex pairs. Furthermore, the pairs were constructed through random assignment in order to ensure that the loneliness scores of the participants in the pairs would represent the distribution of the range of loneliness scores.

The testing session took approximately two hours. Upon entering the laboratory, both participants were escorted into different rooms by two research assistants and they were given a brief explanation of what the experiment would entail. They were then given the consent form to sign. Both participants were then escorted and seated in the experimental room and given a rating scale of how well the participants know each other (refer to Appendix F). Next, the students were given a list of topics developed from

Strassberg and Anchor's (1975) Index of Intimacy of Disclosure (refer to Appendix G) from which they chose six topics each (12 in total) and were instructed to discuss these topics for two minutes per topic. Participants alternated back and forth when choosing and discussing the topics. The first speaker was labeled as Partner A, and the second speaker as Partner B. The participants timed each other with a provided timer and they recorded each others topics, as well as the order in which the topics were chosen. The interaction was video and audio-recorded.

Following the interaction, the students were again escorted into different rooms by the research assistants and administered the questionnaires, including a re-administration of the UCLA Loneliness Scale. The students were then given a debriefing about the study.

Coding of Behavioural Disclosure

Prior to the analysis of the data, inter-rater reliability was determined for two raters based on a random sub-sample of 15 dyads from the entire sample (approximately 25% of the total number of dyads). The video- and audio-tapes of the 15 selected dyads were observed in order to prepare handwritten transcripts of the interactions. These transcripts were then coded as to indicate the separation of each utterance, which was the unit of measurement that was to be coded. One utterance was defined as a statement containing one complete thought or concept. Agreement on the placement of lines in the transcripts to indicate separate utterances were compared between the two raters and inconsistencies were resolved in order to ensure that the same units were being coded when determining the reliability of coding the level of intimacy of disclosure. The levels

of intimacy of the disclosures of each participant during the dyadic conversation was scored by Strassberg and Anchor's (1975) Index of the Intimacy of Disclosure (shown in Appendix H). This scale has been used by various authors to code the intimacy of disclosure in dyadic interactions, including Rotenberg and Whitney (1992) whose coding strategy was used in the present study. An agreement matrix using the three codes (1, 2, and 3) of Strassberg and Anchor's (1975) index was developed and tallies were used to indicate whether the two raters agreed or disagreed on a code for each utterance. Three thousand five hundred and fifty-two utterances in total were coded. Reliability or agreement among the coding for the two raters was determined using Cohen's kappa since it is an agreement statistic that takes into account the proportion of agreement expected by chance and partials it out of the equation to avoid inflated reliabilities due to chance agreements. The inter-rater agreement for coding intimacy of self-disclosures had a kappa (k) coefficient of .88, which is an acceptable level of agreement (Bakeman & Gottman, 1986).

Results

Relation Between Intimacy of Topic Choice and Intimacy of Disclosure

As expected, there were strong correlations between the intimacy of topic choice and the intimacy of disclosure both in the first exchange, $r(104) = .80, p < .001$, and during the conversation, $r(104) = .67, p < .001$. The primary dependent variable employed in the present study was behavioural disclosure.

Qualities of the Scales and Measures

The alphas, means, standard deviations and ranges of all of the scales and

intimacy of disclosure in the first exchange and intimacy of disclosure during the remainder of the conversation are shown in Table 1. The qualities of the scales are similar to those reported in previous studies (Downey & Feldman, 1996; Johnson-George & Swap, 1982; Russell, 1996; Rotter, 1967). ANOVAs indicated that there were gender differences on intimacy during the conversation, $F(1,104) = 9.43, p < .01$; females provided greater intimacy of disclosure during the conversation than did males ($M_s = 9.13$ and 8.49 , respectively).

Correlations Among the Scales Across Dyad

The correlations among the measures across dyad are shown in Table 2. Because of the gender differences, gender was controlled for (partialled out) in the correlations between intimacy of disclosure during the conversation and the other measures. There were significant correlations among all the measures of trust: generalized trust, trust in male friend, and trust in female friend. Consistent with expectation, loneliness was negatively correlated with: (a) all the measures of trust: generalized trust, and trust in male friend, with the exception of trust in female friend which approached significance, and (b) intimacy of disclosure during the conversation. Loneliness was not correlated with intimacy of disclosure in the first exchange. Also, rejection sensitivity was positively correlated with loneliness and negatively correlated with all the measures of trust.

Correlations Among the Measures Within Dyad

The correlations among the loneliness and disclosure for each partner (A and B) are shown in Table 3. There was a positive correlation between partner A's loneliness and partner A's intimacy of disclosure in the first exchange. As shown in Table 3, there was

evidence for dyadic effects. There were positive correlations between Partner A and Partner B both for the intimacy of disclosure in the first exchange and intimacy of disclosure during the conversation.

In order to examine the replicability of Solano et al.'s (1982) findings regarding the interaction between loneliness and the gender of the target of disclosure, Partner A's intimacy of disclosure in the first exchange were subjected to two sets of regression analyses. The first set was a hierarchical regression analysis using Partner A's loneliness, gender of Partner A, and gender of partner B as variables. The second set was a hierarchical analysis using Partner A's loneliness and the same versus opposite gender pairing of the participants as the variables. These analyses yielded only a main effect of Partner A's loneliness, $F(1, 49) = 5.42, p < .05, \beta = .27$ ($R^2 = .09$). As reported, Partner A's loneliness was positively associated with the intimacy of disclosure in the first exchange.

As a result of the significant correlations between the intimacy of disclosure by the two partners (dyadic effects), subsequent analyses were performed on a combined intimacy of disclosure scores across each pair of partners both for the first exchange and during the conversation (termed dyadic intimacy). The correlations among the measures by each partner are shown in Table 4. Partner A's loneliness was positively correlated with dyadic intimacy of disclosure in the first exchange. Also, as hypothesized, Partner A's loneliness was negatively correlated with dyadic intimacy during the conversation, $r(51) = -.23, p < .05$ (one-tailed); Partner B's loneliness was negatively correlated with dyadic intimacy during the conversation but that failed to approach or attain significance.

The relations between loneliness and the other measures paralleled those previously reported although not all of the correlations attained significance because of the reduced sample size. There was a lack of association between trust and intimacy of disclosure with one exception: Partner B's trust in male friend was correlated (positively) with dyadic intimacy of disclosure in the first exchange.

Gender Differences in the Loneliness-Disclosure Relation

Gender differences for the relationship between loneliness and disclosure were examined. Consistent with expectation, there was no relation between loneliness and disclosure for the first exchange for males ($r(51) = .09$) or for females ($r(55) = .01$). For the overall disclosure, loneliness was found to have a slightly stronger negative relation to disclosure in females ($r(55) = -.26$) than in males ($r(51) = -.14$), however these correlations did not differ significantly ($z = .26$).

Gender as a moderator of the relation between loneliness and disclosure during the remainder of the conversation. According to Solano et al.'s (1982) results, the association between loneliness and disclosure was primarily evident with opposite-sex peers. Two hierarchical regression analyses were used to examine that expectation in which dyadic intimacy of disclosure during the remainder of the conversation served as the dependent measure. In the first analysis, Partner A's loneliness, the pairing of the dyads (same-sex vs. opposite-sex) and the interaction between the two served as the independent variables. In the second analysis, Partner B's loneliness, the pairing of the dyads (same-sex vs. opposite-sex) and the interaction between the two served as the independent variable. Neither of the regression analyses were significant.

The contribution of gender and pairing to dyadic disclosure. The contribution of gender and pairing to dyadic disclosure was examined by a hierarchical analysis in which the dyadic intimacy of disclosure during the remainder of the conversation served as the dependent measure. Partner A's gender, Partner B's gender and the interaction between the two variables served as the independent variables. This analysis yielded a marginally significant effect of Partner A's gender, $F(1,49) = 3.56$, $p = .06$; consistent with previous findings, first speaker females were engaged in more intimate dyadic disclosures than were first speaker males. In a supplemental analysis, the data were further coded into three groups: (a) same-sex males, (b) same-sex females, and (c) opposite-sex dyads. An one-way ANOVA on the dyadic intimacy of disclosure during the remainder of the conversation with gender as the independent variable did not yield significance.

Norm Violation, Trust, and Rejection Sensitivity as Mediators

Baron and Kenny (1986) proposed that evidence for a mediator is provided when the following three conditions are met: (a) there is a significant relation between the independent variable and the mediator, (b) there is a significant relation between the mediator and the dependent variable, and (c) the relation between the independent variable and the dependent variable is no longer significant when the mediator is included, with a zero relation serving as the strongest evidence for mediation. None of the patterns of correlations among the variables met the requirements for mediation either across dyad or within dyad. Evidence for norm violation as a mediator for the relation was not found since support for only one of the three norm violation hypotheses was indicated by the results. Although trust was found to be negatively associated with

loneliness, it was not significantly correlated with intimacy of disclosure, thus trust can not serve as a mediator between loneliness and disclosure. Rejection sensitivity was also related to loneliness (positively); it too was not correlated with intimacy of disclosure indicating that rejection sensitivity does not mediate the loneliness-disclosure relation.

Discussion

Reciprocity

Research has demonstrated that reciprocity effects occur in the exchange of disclosures, such that the intimacy of disclosure by one partner in a dyad is reciprocated by the other partner (Derlega, Wilson, & Chaikin, 1976; Rotenberg & Whitney, 1992; Rubin, 1975). This pattern was expected to emerge in the present findings. Evidence was found to support this hypothesis: intimacy level of disclosure was positively correlated between the first speaker and second speaker for the first exchange, and intimacy of disclosure during the conversation.

Solano et al. (1982) Hypotheses

In the study by Solano et al. (1982), it was observed that during the initial disclosure in the interaction, lonely participants chose to disclose high intimacy topics to same-sex peers, while choosing low intimate topics to disclose to opposite-sex peers. This pattern was expected to be replicated in the present study. Some support was found for this hypothesis. The first speaker's loneliness was positively correlated with level of intimacy of information for the initial disclosure. Contrary to the hypothesis, this relation was not qualified by gender of the target, instead first speakers tended to disclose more intimately to their partners regardless of whether their partner was the same-sex or

opposite-sex. One interesting account of this pattern may be that lonely people have such a strong desire to be liked by their partners, that they disclose too intimately at first to same-sex partners. Previous research suggests that individuals who are motivated to make friends tend to disclose more intimately to their conversational partners, in anticipation that it will elicit liking from them (Anchor, Vojtisek, & Berger, 1972; Brundage, Derlega, & Cash, 1977; Burhenne & Mirels, 1970). Thus, lonely participants in particular, who are motivated to make friends since they are unsatisfied with their current relationships, may adopt this pattern of disclosing with the belief that it will promote liking from others.

Solano et al. (1982) found that loneliness was negatively related to topic choice of disclosure throughout the interaction. Thus, it was expected that a negative relation between loneliness and level of intimacy of disclosure throughout the conversation would emerge from the findings of the present study. Overall, lonely individuals tended to disclose less intimately to their partners than nonlonely individuals. Contrary to expectation, this pattern was not qualified by gender of the partner. Evidence to support the loneliness-disclosure relation was found at both the individual and dyadic level. At the dyadic level, the relation was indicated for both partners, although it was not found to be of significant strength for the second speaker. These findings might be interpreted as suggesting that there is a modest relation between loneliness and behavioural disclosure since the effects of the individual analyses represent overinflated correlations due to reciprocity effects, while dyadic analyses are a conservative estimate of the relation since it assumes complete interdependence between the partners. Therefore, it is assumed that the actual correlation would be midway between the individual and dyadic estimates. In

actuality, it should be noted that the strength of the loneliness-disclosure relation found in the present study, although modest, is similar in strength to correlations between other various personality measures and the actual behaviour they are developed to predict.

Studies conducted on behavioural consistency indicate that even when reliable measures are used to assess an actual behaviour, the correlations from one behaviour to the next are usually modest (i.e., .13 - .20) for behaviours of which are assumed to predict the same underlying dispositions (Epstein, 1979; Mischel & Peake, 1982a, 1982b).

Some of the differences found between the Solano et al. (1982) study and the present research may be attributable to methodological and dependent measure differences between the two studies. Solano et al. (1982) employed topic choice as the measure of behavioural disclosure. However, gender differences may affect which topic is chosen by the participant, rather than level of loneliness. Females may tend to perceive certain topics as intimate, which vary from what topics the males perceive as intimate. These possible gender differences would effect the pattern of findings in the Solano et al. (1982) study.

Another account of the differences between the two studies may be as a result of the type of distinction that was made between the lonely and the nonlonely participants. Solano et al. (1982) employed extreme groups, such that individuals that scored high in loneliness were considered lonely while individuals low in loneliness were considered nonlonely. The present study, on the other hand, used a continuous measure of loneliness, such that the whole range of scores, from those high in loneliness to those low in loneliness, were included in the analyses. It is possible that there is a discontinuity in the

concept of loneliness, which would effect the findings in the present study. It may be the case that different patterns in the data emerge when examining the concept of loneliness as a categorical measure versus a continuous measure. It is important to note that there is extensive literature in clinical psychology research that questions whether or not certain disorders or variables should be considered as categorical or continuous. When using categorical distinctions, such that a certain cutoff must be attained in order to be diagnosed or classified as having the phenomena, certain individuals who just miss the cutoff may not receive the type of attention they deserve for their problem. However, with a continuous measure, it becomes unclear as to which level a phenomena becomes a problem and starts to interfere with ones life and functioning. Future research should focus on determining which measure of loneliness is more appropriate to address these issues.

Gender Differences

The study was guided by Dindia and Allen's (1992) research where an overall gender difference in disclosure was expected to emerge, such that females would disclose more intimately to their partners as compared to males. This pattern has also been found to be strengthened when the partner of the disclosing individual is a female. Part of this pattern was found in the present study. Consistent with this hypothesis, females that spoke first in the interaction tended to disclose more intimately to their partners as compared to first speaker males. Contrary to expectation, this pattern was not qualified by gender of the partner.

In addition, it was anticipated that females would have a stronger negative

correlation in the relation between loneliness and disclosure, based on the findings of Berg and Peplau (1982), Solano et al. (1982), Stokes (1987) and others. Findings do support this pattern, although they do not attain significance.

The trend in the gender differences found here are consistent with previous research (Dindia & Allen, 1992; Solano et al., 1982), however the patterns did not attain significance. One interpretation of the decreased strength in gender relations found here may be a result of self-report being used to estimate intimacy of disclosure in previous research which has reported gender differences, instead of behavioural disclosure. Thus, gender differences may be more apparent in self-reported disclosure, but not as strong when assessed by actual behavioural disclosure.

Mediator Hypotheses

Norm violation. Based on the study by Solano et al. (1982), three hypotheses were advanced in order to account for the finding that lonely individuals tend to disclose too intimately to same-sex partners for their initial disclosure. It was hypothesized that lonely individuals violate reciprocity norms when initially disclosing to others, and thus the loneliness of the first speaker should be predictive of a low intimacy level of disclosure during the remainder of the conversation. As predicted, the loneliness of the first speaker was negatively correlated with dyadic intimacy during the conversation.

It was hypothesized that the second speaker in the interaction would not reciprocate the level of intimacy of the first speaker during the conversation as a result of the first speaker over-disclosing in the initial exchange, thus indicating a lack of reciprocity. Evidence to support this pattern was expected to be found in the present

study. Contrary to expectation, the hypothesis was not supported. The level of intimacy for the first and second speaker was positively correlated indicating that reciprocity of level of intimacy of disclosures was found.

It was predicted that the atypical patterns of disclosure by lonely participants during the initial disclosure would be responsible for, or mediate the relation between loneliness and subsequent disclosure. It was expected that evidence for this mediational pattern would be present in the study. Support was not found for this hypothesis. Norm violation was not a mediator of the loneliness-disclosure relation.

Trust. Research by Jones et al. (1981) and Rotenberg (1994) has indicated that there is a negative relation between loneliness and trust. Support for this relation was expected to be found in the present study. Consistent with Jones et al.'s (1981) and Rotenberg's (1994) hypothesis, loneliness was found to have a negative correlation with trust, although the relation did not attain significance for trust in female friend. Thus, individuals that are lonely tend to have lower interpersonal trust in others as compared to nonlonely participants.

Based on Rotenberg (1994), it was hypothesized that interpersonal trust acts as a mediator between loneliness and disclosure, such that lonely individuals disclose less intimately to their partners due to a tendency to distrust others, which contributes to or maintains a sense of loneliness. This effect was expected to be found in the present study. Contrary to expectation, the patterns of correlations failed to meet the requirements for mediation either across dyad or within dyad. Trust was not found to be correlated with disclosure, indicating that trust can not act as a mediator for the relation between

loneliness and disclosure.

It was anticipated that individuals who are rejection sensitive would be less trusting of others. Consistent with expectation, evidence to support this relation was found, such that rejection sensitivity was negatively correlated with trust.

Trust was not found to mediate the loneliness-disclosure relation, contrary to expectation. This lack of a relation may be due to the type of relation that was analyzed in the present study. It was anticipated that trust would be related with intimacy of disclosure. However, this relation may be due to the individual adopting an ambivalent motive when disclosing to unfamiliar others, effecting the subsequent analyses performed regarding trust as a mediator. Individuals high in interpersonal trust may not automatically divulge highly personal information to unfamiliar others. They may be trusting, but they are not necessarily naive enough to tell a stranger personal information. It may be necessary for them to develop trust as they interact with a partner in order to prevent being taken advantage of or having their confidence betrayed. Thus, trust may not be directly manifested in disclosure. This factor may have affected the relation observed in the present study. Future research should consider looking at the trust-disclosure relation among acquaintances, as well as unfamiliar others, when investigating trust as a mediator for the loneliness-disclosure relation to determine if ambivalent motive is evident in the relation between trust and disclosure.

Rejection sensitivity. Jones et al. (1981) and Stokes (1987) hypothesized that loneliness would have a positive relation with rejection sensitivity. It was expected that this relation would be evident in the present study. Evidence was found to support this

hypothesis. Lonely individuals were found to be more sensitive to rejection than nonlonely individuals.

Based on the predictions of Jones et al. (1981) and Stokes (1987), it was hypothesized that rejection sensitivity would be correlated with disclosure. Rejection sensitivity, however, was not found to be associated with disclosure, thus it can not be considered to be a possible mediator in the loneliness-disclosure relation.

Are There Mediators of the Relation Between Loneliness and Disclosure?

If norm violation, interpersonal trust, and rejection sensitivity do not mediate the relation between loneliness and behavioural disclosure, the perplexing question is raised of what factors do mediate the relation? One possibility that warrants attention in future research is communication anxiety since it has been found to be related to loneliness (Segrin & Kinney, 1995; Solano & Koester, 1989). Individuals who are anxious entering a social situation may tend to disclose less intimately to their partners, causing them to restrict or inhibit the development of intimate relationships. The measure of rejection sensitivity in the present study did include the aspect of communication anxiety in a broad way, however, a more refined measure of communication anxiety should be employed to determine if it serves as a mediator for the loneliness-disclosure relation. Although self-reported communication anxiety was not found to mediate the loneliness-disclosure relation in the study by Bruch, Kaflowitz, and Pearl (1988), it may be that behaviourally assessed communication anxiety does act as a mediator for the relation. This hypothesis should be examined in future research.

In conclusion, the present findings suggest a complex relation between loneliness

and behavioural disclosure. For the initial disclosure, loneliness was related to high disclosure, while throughout the conversation loneliness was associated with low disclosure at both the individual and dyadic level. There was a trend in the data to suggest that gender differences were present, such that females tended to disclose more intimately to their partners compared to males, and the relation between loneliness and disclosure was stronger for females than males. Evidence of a mediator for the relation between loneliness and disclosure was not found. Future research should focus on factors that mediate the relation, such as communication anxiety, in order to gain a better perspective of what causes loneliness, and to guide researchers in developing treatments for individuals suffering from this problem.

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Table 1

Alphas, Means, Standard Deviations (SD) and Ranges of the Scales

Scale	Alpha	Mean	SD	Range
UCLA Loneliness	.87	33.62	7.40	20 to 59
Generalized Trust	.67	71.82	7.94	53 to 92
Rejection Sensitivity	.85	7.35	3.27	1.22 to 19.06
Trust in Male Friend	.84	6.13	1.23	3.00 to 8.00
Trust in Female Friend	.86	6.57	1.23	1.14 to 8.00
Intimacy 1 ^a		1.48	.32	1 to 3
Intimacy		8.82	1.11	6.51 to 11.80

Table 2

Correlations Among the Measures Across Dyads

Scale	GT	RS	TMF	TFF	In l st	Int
Loneliness	-.33*** (122)	.33*** (122)	-.31*** (122)	-.31*** (122)	.06 (104)	-.21* (103)
Generalized Trust (GT)		-.25** (122)	.26** (122)	.17 (122)	-.03 (104)	-.02 (103)
Rejection Sensitivity (RS)			-.36*** (122)	-.29*** (122)	-.10 (104)	.05 (103)
Trust in Male Friend (TMF)				.30*** (122)	.07 (104)	-.02 (103)
Trust in Female Friend (TFF)					-.13 (104)	.14 (103)
Intimacy 1 st (Int l st)						.02 (103)
Intimacy (Int)						

Note: * $p < .05$, ** $p < .01$, and *** $p < .001$. Also, the dfs are shown in brackets.

Table 3

Correlations Among Loneliness and Intimacy of Disclosure by Dyad Partner (A & B)

Scale	IntA1st	IntA	LoneB	IntB1st	IntB
Partner A (First Speaker)					
Loneliness	.30*	-.13	-.16	.20	-.16
Intimacy -1st (IntA1st)		-.01	-.03	.33*	-.02
Intimacy (IntA)			.04	-.08	.51***
Partner B (Second Speaker)					
Loneliness (LoneB)				-.14	-.18
Intimacy -1st (IntB1st)					.09
Intimacy (IntB)					

Note: * $p < .05$, and *** $p < .001$. Also, all dfs are 51 with the exception of the correlation between Loneliness of Partner A and Partner B which is 60.

Table 4

Correlations Among the Measures Within Dyad

	Partner A						Partner B				
	Dyaint	LoneA	GTA	RSA	TMFA	TFFA	LoneB	GTB	TMFB	TFFB	RSB
Scale											
Intimacy 1st	-.01	.30*	-.17	.01	-.14	-.13	-.22	.07	.29*	.02	-.10
(DyInt1st)	(53)	(53)	(53)	(53)	(53)	(53)	(53)	(53)	(53)	(53)	(53)
Intimacy (Dyint)		-.23	-.03	.17	-.15	.26	-.09	-.27	.00	-.01	.04
		(53)	(53)	(53)	(53)	(53)	(53)	(53)	(53)	(53)	(53)
Partner A											
Loneliness (LoneA)			-.43***	.25	-.30*	-.49***	-.15	.19	.03	-.25	.03
			(62)	(62)	(62)	(62)	(62)	(62)	(62)	(62)	(62)
Generalized Trust				-.31*	.24	.25*	-.17	-.15	.00	.17	-.20
(GTA)				(62)	(62)	(62)	(62)	(62)	(62)	(62)	(62)
Rejection Sensitivity					-.45***	-.29*	.04	-.09	.03	-.26*	.20
(RSA)					(62)	(62)	(62)	(62)	(62)	(62)	(62)
Trust in Male Friend						.43***	.02	.11	.03	.19	-.08
(TMFA)						(62)	(62)	(62)	(62)	(62)	(62)
Trust in Female Friend							.06	-.10	.04	.16	.03
(TFFA)							(62)	(62)	(62)	(62)	(62)
Partner B											
Loneliness (LoneB)								-.21	-.33**	-.14	.43***
								(62)	(62)	(62)	(62)
Generalized Trust									.28*	.10	-.16
(GTB)									(62)	(62)	(62)
Trust in Male Friend										.19	-.26*
(TMFB)										(62)	(62)
Trust in Female Friend											-.29*
(TFFB)											(62)

Note: * $p < .05$, ** $p < .01$, and *** $p < .001$. Also, the dfs are shown in brackets.

Appendix A: Participation Consent Form



Dear Participant:

This is a study that I (Dr. Ken J. Rotenberg) and my students from the Psychology Department at Lakehead University are carrying out. The purpose of the study is to assess the types of conversations individuals have with others and how that relates to their own personal experiences and perceptions. In the study, you will be involved in a conversation with another student. Afterwards, you will be asked to report your thoughts, feelings and opinions about the conversation and about your partner. In next part of the study, you will be asked about your typical communications with others and then will complete questionnaires pertaining to your experiences and thoughts. We would like to emphasize that, as a participant, you can decide not to answer any of the questions posed or even to stop participating at any time. Of course, we encourage you to continue in the study and answer as many questions as possible.

The conversations in the study will be videotaped and audiotaped. These recordings will be used solely for data collection in the study; they will not be released, in part or in whole, to others. In that vein, it is important to point out that the data gathered from this study will be reported in terms of overall patterns. In effect, the information provided by each participant will be treated as completely confidential. In accordance with Senate Research Committee requirements, the data yielded by the study will be stored in a confidential form for a period of 7 years at Lakehead University.

Based on previous research on the current topic, there appears to be no risk to individuals who participate in this study. By participating, however, you will help researchers in the field of psychology to have a better understanding of human behaviour and thought. Please note that I will provide a detailed description of the nature of the study and the findings yielded by it, will be presented as part of a lecture in your introductory psychology class. If you have any concerns arising from participating in the study, please call me -- Dr. Ken Rotenberg -- at (807) 343-8630.

Yours sincerely,

Ken J. Rotenberg, Ph.D.
Associate Professor

Please print your name and then provide your signature indicating your willingness to participate in the study.

I _____ agree to participate in the study by Dr. Ken J. Rotenberg and his students. Signed _____.

By agreeing to participate I understand that:

(a) The purpose of the study is to assess the types of conversations individuals have with others and how that relates to their own personal experiences and perceptions

(b) I will be involved in a conversation with another student. Afterwards, I will be asked to report my thoughts, feelings and opinions about the conversation and about my partner. In next part of the study, I will be asked about my typical communications with others and then will complete questionnaires pertaining to my experiences and thoughts.

(c) As a participant, I can decide not to answer any of the questions posed or even to stop participating at any time.

(d) The information that I provide will be treated as confidential. The data gathered from this study will be reported in terms of overall patterns.

(e) There are no apparent risks of participating in this study.

(f) A detailed description of the nature of the study and the findings yielded by it, will be provided as part of a lecture in the introductory psychology class. (The date for the presentation will be announced in class.)

Appendix B: The UCLA Loneliness Scale

QUESTIONNAIRE

In order to complete this questionnaire you will need to provide your answers on this sheet and on then do so on the accompanying multiple choice answer sheet.

(A) Print your student # (here) : _____ and fill-in the "I.D. Number" on the multiple answer sheet.

(B) Print your name (here): _____ and on the multiple choice answer sheet in the space allotted.

(C) Print your phone number (here) : _____ and on the multiple choice answer sheet in the space allotted for "Phone Number."

(D) Print your age in **years and months** (here): _____ and print that on the back of the multiple answer sheet in the space provided for "Date."

(E) Your Sex: Male (A) Female (B) Circle here and fill-in the letter in first colum of "Code."

The following statements describe how people sometimes feel. For each statement, please indicate how often you feel the way described by: (a) writing a letter in the space provided and (b) then filling-in the corresponding letter on the multiple choice answer sheet. Here is an example:

How often do you feel happy?

If you have never felt happy, you would respond "never" (A); if you always feel happy, you would respond "always" (D)

NEVER A	RARELY B	SOMETIMES C	ALWAYS D	Rating
1. How often do you feel that you are "in tune" with the people around you?				_____
2. How often do you feel that you lack companionship?				_____
3. How often do you feel that there is no one you can turn to?				_____
4. How often do you feel alone?				_____
5. How often do you feel part of a group of friends?				_____
6. How often do you feel that you have a lot in common with the people around you?				_____
7. How often do you feel that you are no longer close to anyone?				_____
8. How often do you feel that your interests and ideas are not shared by those around you?				_____
9. How often do you feel outgoing and friendly?				_____
10. How often do you feel close to people?				_____
11. How often do you feel left out?				_____
12. How often do you feel that your relationships with others are not meaningful?				_____
13. How often do you feel that no one really knows you well?				_____
14. How often do you feel isolated from others?				_____
15. How often do you feel you can find companionship when you want it?				_____
16. How often do you feel that there are people who really understand you?				_____
17. How often do you feel shy?				_____
18. How often do you feel that people are around you but not with you?				_____
19. How often do you feel that there are people you can talk to?				_____
20. How often do you feel that there are people you can turn to?				_____

**Appendix C: The Emotional Trust Subscale of Johnson-George and Swap's
(1982) Specific Interpersonal Trust Scale (Per Target)**

Questionnaire

In this questionnaire you are being asked to provide your judgments of your mother, father, same-sex friend and romantic partner. When answering the questions for each person write down his/her initials at the top of the page and fill in his/her initials as you read each question. For each question, circle the number on the scale that best represents your answer. The scales range from "Strongly Agree" to "Strongly Disagree."

Your Mother: Her initials are _____ (Circle your answers to the questions.)

1. If I told _____ what things I worry about, he/she would not think my concerns were silly.

1	2	3	4	5	6	7	8	9
Strongly Agree								Strongly Disagree

2. If _____ unexpectedly laughed at something I did or said, I would wonder if he/she was being critical and unkind.

1	2	3	4	5	6	7	8	9
Strongly Agree								Strongly Disagree

3. I could talk freely to _____ and know that _____ would want to listen.

1	2	3	4	5	6	7	8	9
Strongly Agree								Strongly Disagree

4. If _____ knew what kinds of things hurt my feelings, I would never worry that he/she would use them against me, even if our relationship changed.

1	2	3	4	5	6	7	8	9
Strongly Agree								Strongly Disagree

5. I would be able to confide in _____ and know that he/she would want to listen.

1	2	3	4	5	6	7	8	9
Strongly Agree								Strongly Disagree

6. _____ would never intentionally misrepresent my point of view to others.

1	2	3	4	5	6	7	8	9
Strongly Agree								Strongly Disagree

7. I would be able to confide in _____ and know that he/she would want to listen.

1	2	3	4	5	6	7	8	9
Strongly Agree								Strongly Disagree

Your Father: His initials are _____ (Circle your answers to the questions.)

1. If I told _____ what things I worry about, he/she would not think my concerns were silly.

1	2	3	4	5	6	7	8	9
Strongly Agree								Strongly Disagree

2. If _____ unexpectedly laughed at something I did or said, I would wonder if he/she was being critical and unkind.

1	2	3	4	5	6	7	8	9
Strongly Agree								Strongly Disagree

3. I could talk freely to _____ and know that _____ would want to listen.

1	2	3	4	5	6	7	8	9
Strongly Agree								Strongly Disagree

4. If _____ knew what kinds of things hurt my feelings, I would never worry that he/she would use them against me, even if our relationship changed.

1	2	3	4	5	6	7	8	9
Strongly Agree								Strongly Disagree

5. I would be able to confide in _____ and know that he/she would want to listen.

1	2	3	4	5	6	7	8	9
Strongly Agree								Strongly Disagree

6. _____ would never intentionally misrepresent my point of view to others.

1	2	3	4	5	6	7	8	9
Strongly Agree								Strongly Disagree

7. I would be able to confide in _____ and know that he/she would want to listen.

1	2	3	4	5	6	7	8	9
Strongly Agree								Strongly Disagree

Your Male Friend: His/Her initials are _____ (Circle your answers to the questions.)

1. If I told _____ what things I worry about, he/she would not think my concerns were silly.

1	2	3	4	5	6	7	8	9
Strongly Agree								Strongly Disagree

2. If _____ unexpectedly laughed at something I did or said, I would wonder if he/she was being critical and unkind.

1	2	3	4	5	6	7	8	9
Strongly Agree								Strongly Disagree

3. I could talk freely to _____ and know that _____ would want to listen.

1	2	3	4	5	6	7	8	9
Strongly Agree								Strongly Disagree

4. If _____ knew what kinds of things hurt my feelings, I would never worry that he/she would use them against me, even if our relationship changed.

1	2	3	4	5	6	7	8	9
Strongly Agree								Strongly Disagree

5. I would be able to confide in _____ and know that he/she would want to listen.

1	2	3	4	5	6	7	8	9
Strongly Agree								Strongly Disagree

6. _____ would never intentionally misrepresent my point of view to others.

1	2	3	4	5	6	7	8	9
Strongly Agree								Strongly Disagree

7. I would be able to confide in _____ and know that he/she would want to listen.

1	2	3	4	5	6	7	8	9
Strongly Agree								Strongly Disagree

Your Female Friend: His/Her initials are _____ (Circle your answers to the questions.)

1. If I told _____ what things I worry about, he/she would not think my concerns were silly.

1	2	3	4	5	6	7	8	9
Strongly Agree								Strongly Disagree

2. If _____ unexpectedly laughed at something I did or said, I would wonder if he/she was being critical and unkind.

1	2	3	4	5	6	7	8	9
Strongly Agree								Strongly Disagree

3. I could talk freely to _____ and know that _____ would want to listen.

1	2	3	4	5	6	7	8	9
Strongly Agree								Strongly Disagree

4. If _____ knew what kinds of things hurt my feelings, I would never worry that he/she would use them against me, even if our relationship changed.

1	2	3	4	5	6	7	8	9
Strongly Agree								Strongly Disagree

5. I would be able to confide in _____ and know that he/she would want to listen.

1	2	3	4	5	6	7	8	9
Strongly Agree								Strongly Disagree

6. _____ would never intentionally misrepresent my point of view to others.

1	2	3	4	5	6	7	8	9
Strongly Agree								Strongly Disagree

7. I would be able to confide in _____ and know that he/she would want to listen.

1	2	3	4	5	6	7	8	9
Strongly Agree								Strongly Disagree

Your Romantic Partner: His/Her initials are _____ (Circle your answers to the questions.)

1. If I told _____ what things I worry about, he/she would not think my concerns were silly.

1	2	3	4	5	6	7	8	9
Strongly Agree								Strongly Disagree

2. If _____ unexpectedly laughed at something I did or said, I would wonder if he/she was being critical and unkind.

1	2	3	4	5	6	7	8	9
Strongly Agree								Strongly Disagree

3. I could talk freely to _____ and know that _____ would want to listen.

1	2	3	4	5	6	7	8	9
Strongly Agree								Strongly Disagree

4. If _____ knew what kinds of things hurt my feelings, I would never worry that he/she would use them against me, even if our relationship changed.

1	2	3	4	5	6	7	8	9
Strongly Agree								Strongly Disagree

5. I would be able to confide in _____ and know that he/she would want to listen.

1	2	3	4	5	6	7	8	9
Strongly Agree								Strongly Disagree

6. _____ would never intentionally misrepresent my point of view to others.

1	2	3	4	5	6	7	8	9
Strongly Agree								Strongly Disagree

7. I would be able to confide in _____ and know that he/she would want to listen.

1	2	3	4	5	6	7	8	9
Strongly Agree								Strongly Disagree

Please complete the following information about your romantic partner.

His/her age is : _____ years

His/her gender is: Male Female (circle one)

Is he/she your romantic partner at this time: Yes No (circle one)

If no to the above question, how long ago was he/she a romantic partner? _____
years _____ months

Your relationship with him/her is/was one of: (circle one and complete length question)

Length

casually dating _____ years _____ months of casually dating
(How often do you date: _____)

steady dating _____ years _____ months of steady dating
(How often do you date: _____)

cohabitation _____ years _____ months of cohabitation

married _____ years _____ months of marriage

separated _____ years _____ months of marriage
&
_____ years _____ months of separation

divorced _____ years _____ months of marriage
&
_____ years _____ months of divorce
& separation

or other (specify) _____ with length of
_____ years and _____ months

Appendix D: Rotter's (1967) Interpersonal Trust Scale

This is a questionnaire to determine the attitudes and beliefs of different people on a variety of statements. Please answer the statements by giving as true a picture of your own beliefs as possible. Be sure to read each item carefully and show your beliefs by circling the appropriate number on your answer sheet.

If you strongly agree with an item, circle number 1. Circle number 2 if you mildly agree with the item. That is, circle number 2 if you think the item is generally more true than untrue according to your beliefs. Circle 3 if you feel the item is about equally true as untrue. Circle 4 if you mildly disagree with the item. That is, circle number 4 if you feel the item is more untrue than true. If you strongly disagree with an item, circle number 5.

1. Strongly agree
2. Mildly agree
3. Agree and disagree equally
4. Mildly disagree
5. Strongly disagree

1. Most people would rather live in a climate that is mild all year around than in one in which winters are cold.
2. Hypocrisy is on the increase in our society.
3. In dealing with strangers one is better off to be cautious until they have provided evidence that they are trustworthy.

1. Strongly agree 2. mildly agree 3. agree and disagree equally
4. Mildly disagree 5. strongly disagree

4. This country has a dark future unless we can attract better people into politics.
5. Fear of social disgrace or punishment rather than conscience prevents most people from breaking the law.
6. Parents usually can be relied upon to keep their promises.
7. The advice of elders is often poor because the older person doesn't recognize how times have changed.
8. Using the Honor System of not having a teacher present during exam would probably result in increased cheating.
9. The United Nations will never be an effective force in keeping world peace.
10. Parents and teachers are likely to say what they believe themselves and not just what they think is good for the child to hear.
11. Most people can be counted on to do what they say they will do.
12. As evidenced by recent books and movies morality seems on the downgrade in this country.
13. The judiciary is a place where we can all get unbiased treatment.
14. It is safe to believe that in spite of what people say, most people are primarily interested in their own welfare.
15. The future seems very promising.
16. Most people would be horrified if they knew how much news the public hears and sees is distorted.

1. Strongly agree 2. mildly agree 3. agree and disagree equally
4. Mildly disagree 5. strongly disagree

17. Seeking advice from several people is more likely to confuse than it is to help one.
18. Most elected public officials are really sincere in their campaign promises.
19. There is no simple way of deciding who is telling the truth.
20. This country has progressed to the point where we can reduce the amount of competitiveness encouraged by schools and parents.
21. Even though we have reports in newspapers, radio and television, it is hard to get objective accounts of public events.
22. It is more important that people achieve happiness than that they achieve greatness.
23. Most experts can be relied upon to tell the truth about the limits of their knowledge.
24. Most parents can be relied upon to carry out their threats of punishment.
25. One should not attack the political beliefs of other people.
26. In these competitive times one has to be alert or someone is likely to take advantage of you.
27. Children need to be given more guidance by teachers and parents than they now typically get.
28. Most rumors usually have a strong element of truth.
29. Many major national sport contests are fixed on one way or another.

1. Strongly agree 2. mildly agree 3. agree and disagree equally
4. Mildly disagree 5. strongly disagree

30. A good leader molds the opinions of the group he is leading rather than merely following the wishes of the majority.
31. Most idealists are sincere and usually practice what they preach.
32. Most salesmen are honest in describing their products.
33. Education in this country is not really preparing young men and women to deal with the problems of the future.
34. Most students in school would not cheat even if they were sure of getting away with it.
35. The hordes of students now going to college are going to find it more difficult to find good jobs when they graduate than did the college graduates of the past.
36. Most repairmen will not overcharge even if they think you are ignorant of their speciality.
37. A large share of accident claims filed against insurance companies are phony.
38. One should not attack the religious beliefs of other people.
39. Most people answer public opinion polls honestly.
40. If we really knew what was going on in international politics, the public would have more reason to be frightened than they now seem to be.

Answer Sheet

Question	Answer				
1	1	2	3	4	5
2	1	2	3	4	5
3	1	2	3	4	5
4	1	2	3	4	5
5	1	2	3	4	5
6	1	2	3	4	5
7	1	2	3	4	5
8	1	2	3	4	5
9	1	2	3	4	5
10	1	2	3	4	5
11	1	2	3	4	5
12	1	2	3	4	5
13	1	2	3	4	5
14	1	2	3	4	5
15	1	2	3	4	5
16	1	2	3	4	5
17	1	2	3	4	5
18	1	2	3	4	5
19	1	2	3	4	5
20	1	2	3	4	5

21	1	2	3	4	5
22	1	2	3	4	5
23	1	2	3	4	5
24	1	2	3	4	5
25	1	2	3	4	5
26	1	2	3	4	5
27	1	2	3	4	5
28	1	2	3	4	5
29	1	2	3	4	5
30	1	2	3	4	5
31	1	2	3	4	5
32	1	2	3	4	5
33	1	2	3	4	5
34	1	2	3	4	5
35	1	2	3	4	5
36	1	2	3	4	5
37	1	2	3	4	5
38	1	2	3	4	5
39	1	2	3	4	5
40	1	2	3	4	5

Appendix E: Downey and Feldman's (1996) Rejection Sensitivity Scale

Below are a number of situations that people encounter. Imagine as vividly as possible that each situation happened to you and then provide your judgments on the scales provided. Circle the number on the scale that best describes your answer.

1. You ask someone in class if you can borrow his/her notes.

How concerned or anxious would you be over whether your classmate would lend you his or her notes?

1	2	3	4	5	6
Very					Very
Unconcerned					Concerned

How likely is that your classmate would lend you his or her notes?

1	2	3	4	5	6
Very					Very
Likely					Unlikely

2. You ask your boyfriend/girlfriend to move in with you.

How concerned or anxious would you be over whether your boyfriend/girlfriend would move in with you?

1	2	3	4	5	6
Very					Very
Unconcerned					Concerned

How likely would it be that boyfriend/girlfriend would move in with you?

1	2	3	4	5	6
Very					Very
Likely					Unlikely

3. You ask your parents for help in deciding what programs to apply to.

How concerned or anxious would you be over whether your parents would help you to decide what programs to apply to?

1	2	3	4	5	6
Very					Very
Unconcerned					Concerned

How likely would it be that your parents would help you to decide what programs to apply to?

1	2	3	4	5	6
Very					Very
Likely					Unlikely

4. You ask someone you don't know well out on a date.

How concerned or anxious would you be over whether the person would go on a date with you?

1	2	3	4	5	6
Very					Very
Unconcerned					Concerned

How likely would it be that the person would go on a date with you?

1	2	3	4	5	6
Very					Very
Likely					Unlikely

5. Your boyfriend/girlfriend has plans to go out with friends tonight, but you really want to spend the evening with him/her, and you tell him/her so.

How concerned or anxious would you be over whether your boyfriend/girlfriend would spend the evening with you?

1	2	3	4	5	6
Very					Very
Unconcerned					Concerned

How likely would it be that your boyfriend/girlfriend would spend the evening with you?

1	2	3	4	5	6
Very					Very
Likely					Unlikely

6. You ask your parents for extra money to cover living expenses.

How concerned or anxious would you be over whether your parents would give you extra money to cover living expenses?

1	2	3	4	5	6
Very					Very
Unconcerned					Concerned

How likely would it be that your parents would give you extra money to cover living expenses?

1	2	3	4	5	6
Very					Very
Likely					Unlikely

7. After class you tell your professor that you have been having some trouble with a section of the course and ask if he/she can give you some extra help.

How concerned or anxious would you be over whether your professor would give you some extra help?

1	2	3	4	5	6
Very					Very
Unconcerned					Concerned

How likely would it be that your professor would give you some extra help?

1	2	3	4	5	6
Very					Very
Likely					Unlikely

8. You approach a close friend to talk after doing or saying something that seriously upset him/her.

How concerned or anxious would you be over whether your close friend would talk to you?

1	2	3	4	5	6
Very					Very
Unconcerned					Concerned

How likely would it be that your close friend would talk to you?

1	2	3	4	5	6
Very					Very
Likely					Unlikely

9. You ask someone in one of your classes to coffee.

How concerned or anxious would you be over whether your classmate would go for coffee?

1	2	3	4	5	6
Very					Very
Unconcerned					Concerned

How likely would it be that your classmate would go for coffee?

1	2	3	4	5	6
Very					Very
Likely					Unlikely

10. After graduation you can't find a job and you ask your parents if you can live at home for a while.

How concerned or anxious would you be over whether your parents would agree to let you live at home for a while?

1	2	3	4	5	6
Very					Very
Unconcerned					Concerned

How likely would it be that your parents would agree to let you live at home for a while?

1	2	3	4	5	6
Very					Very
Likely					Unlikely

11. You ask a friend to go on vacation with you over Spring Break.

72

How concerned or anxious would you be over whether your friend would go on a vacation with you over Spring Break?

1	2	3	4	5	6
Very					Very
Unconcerned					Concerned

How likely would it be that your friend would go on a vacation with you over Spring Break?

1	2	3	4	5	6
Very					Very
Likely					Unlikely

12. You call your boyfriend/girlfriend after a bitter argument and tell him/her you want to see him/her.

How concerned or anxious would you be over whether your boyfriend/girlfriend would want to see you?

1	2	3	4	5	6
Very					Very
Unconcerned					Concerned

How likely would it be that your boyfriend/girlfriend would want to see you?

1	2	3	4	5	6
Very					Very
Likely					Unlikely

13. You ask a friend if you can borrow something of his/hers.

How concerned or anxious would you be over whether your friend would let you borrow something of his/her?

1	2	3	4	5	6
Very					Very
Unconcerned					Concerned

How likely would it be that your friend would let you borrow something of his/her?

1	2	3	4	5	6
Very					Very
Likely					Unlikely

14. You ask your parents to come to an occasion important to you.

How concerned or anxious would you be over whether your parents would come to an occasion important to you?

1	2	3	4	5	6
Very					Very
Unconcerned					Concerned

How likely would it be that your parents would come to an occasion important to you?

1	2	3	4	5	6
Very					Very
Likely					Unlikely

15. You ask a friend to do you a big favour.

How concerned or anxious would you be over whether your friend would do you a big favour?

1	2	3	4	5	6
Very					Very
Unconcerned					Concerned

How likely would it be that your friend would do you a big favour?

1	2	3	4	5	6
Very					Very
Likely					Unlikely

16. You ask your boyfriend/girlfriend if he/she really loves you.

How concerned or anxious would you be over whether your boyfriend/girlfriend said he/she really loves you?

1	2	3	4	5	6
Very					Very
Unconcerned					Concerned

How likely would it be that your boyfriend/girlfriend said he/she really loves you?

1	2	3	4	5	6
Very					Very
Likely					Unlikely

17. You go to a party and notice someone on the other side of the room, and then you ask them to dance.

How concerned or anxious would you be over whether the person would dance with you?

1	2	3	4	5	6
Very					Very
Unconcerned					Concerned

How likely would it be that the person would dance with you?

1	2	3	4	5	6
Very					Very
Likely					Unlikely

18. You ask your boyfriend/girlfriend to come home to meet your parents.

How concerned or anxious would you be over whether your boyfriend/girlfriend would come over to meet your parents?

1	2	3	4	5	6
Very					Very
Unconcerned					Concerned

How likely would it be that your boyfriend/girlfriend would come over to meet your parents?

1	2	3	4	5	6
Very					Very
Likely					Unlikely

Appendix F: Rating Scale

1

2

3

4

5

6

7

Not at all

Very well

Appendix G: Disclosure Topics

Topics

1. Your life plans and goals
2. Your interests (for example, television or sports)
3. Names and personality descriptions of self or significant others (for example, attributes of lover or partner)
4. Your sexual habits and preferences (for example, real, imaginary, or dreams)
5. Feelings and behaviours (positive and negative) relating to marriage, family, and significant others
6. Intense emotion you have experienced, directed toward self or others (for example, feelings of depression, love, hate, anger, elation, fulfillment, extreme fears, desires, and jealousy)
7. General public information (for example, name, age, religion, occupation, address, height, weight, marital status, etc.)
8. Your moral perspectives and evaluations of issues or events (for example, killing in time of war)
9. Your vocational preferences (for example, teacher, police officer, forester)
10. Important hurt, loss, or discomfort that you have caused or received (for example an actual or anticipated event)
11. Important and meaningful relationships you have experienced or are experiencing
12. General likes and dislikes
13. Places you have lived, traveled to, or plan to travel to (for example, location description)
14. Significant illegal, immoral, or antisocial acts or impulses of self or significant others
15. Personal strengths and weaknesses
16. Superstitions you have
17. Your financial status
18. Your political or economic attitudes
19. Annoyances you have
20. Rejection by significant others you have experienced

21. Schooling
22. Physical characteristics of self and others
23. Addictions you have or had (for example, drugs or alcohol)
24. Mild fears you have
25. Abortion(s) you have had
26. Important and /or detailed differences you have, either physical or psychological (for example, false limbs, glass eyes, toupees, or disease)
27. Problems you have or had with weight and/or height
28. Previous psychiatric disorder(s) of self or significant others
29. Times when you experienced a failure to take responsibility for yourself
30. Major disappointments or regrets you have experienced
31. Minor illegal or anti-social acts you have committed
32. Crises in your life that you have experienced (for example, in the past or present)
33. Physical aggression that you have given or received
34. Shame you have experienced
35. Your personal hygiene, health and maintenance
36. Dreams and non-sexual fantasy you have or have had
37. Your views on child management
38. Counseling or therapy experience you have had (for example, real or contemplated)
39. Lies told to, by, or about yourself
40. Worries, disappointments, rejections, losses, or ridicule that you have experienced
41. Your daily habits and preferences (for example, smoking, eating)
42. Your earlier life events (for example, past school grades and performance)
43. Illegal or immoral activity of significant others
44. Feelings about the future as it relates to yourself and significant others (for example, aging and dying)
45. Sex-related topics (for example, dating, kissing, fondling, sex-related humor)

- 46. Your religious preferences
- 47. Swearing or being the subject of profanity from others
- 48. Your successes and accomplishments

Appendix H: Strassberg and Anchor's (1975) Index of Intimacy of Disclosure

Intimacy Rating Scale

General guidelines for use

- 1. Before selecting a rating for an item, review all categories.**
- 2. Use a separate category (0) when no response at all is provided to an item.**
- 3. Rate explicit content; avoid making interpretations or assumptions about the intention or motivation underlying a response.**
- 4. The term "significant others" is meant to include family members, friends and associates with whom one is intimate.**
- 5. If a response encompasses content subsumed by both categories I and II, give it a I rating; if both categories II and III are relevant, employ a category III rating.**

I. Low Content Self-Disclosure

- A. Demographic Public Information (Name, age, religion, occupation, address, height, weight, marital status, etc.)**
- B. Daily Habits and Preferences (e.g., smoking)**
- C. Schooling**
- D. Interests (television, sports)**
- E. Hobbies and other leisure time activities**
- F. Fashion (i.e., preferences)**
 - 1. Make-up**
- G. Personal hygiene, health and maintenance**
- H. Physical characteristics**
- I. Vocational preferences**
- J. Borrowing and lending behaviour**
- K. Political/economic attitudes**
- L. Descriptions of events without affect**
- M. Aesthetics**
- N. Geography (e.g., travel plans; location description)**

II. Moderately Intimate Self-Disclosure

- A. Personal ideology (with relation to how one conducts his/her life)**
 - 1. Religious preferences**
 - 2. Moral perspective and evaluations (e.g., euthanasia and killing in time of war)**
 - 3. Feelings about the future as it relates to oneself and significant others (e.g., aging and dying)**
 - 4. Superstitions**
 - 5. Dreams and non-sexual fantasy**
 - 6. Annoyances**
- B. Life plans**
 - 1. Ambitions**
 - 2. Aspirations**
 - 3. Goals**
- C. Earlier Life Events (not directly related to one's immediate life situation)**
 - 1. School grades and performance**
 - 2. Worries, disappointments**
 - 3. Successes and accomplishments**
 - 4. Rejections and losses**
 - 5. Episodes of ridicule**
 - 6. Lies told to, by, or about oneself**
- D. Life style**
 - 1. Financial status**
 - 2. Discussion of certain sex-related topics**

- a. Dating, kissing and fondling
 - b. Swearing or being the subject of profanity from others
 - c. Sex-related humor
- E. Illegal or immoral activity of significant others
- F. Child Management
- G. Names and personality descriptions of self or significant others (e.g., lovers and boyfriends)
- H. Admission of minor illegal or anti-social acts
 - 1. Traffic ticket
 - 2. Mistreatment of animals
 - 3. Experimentation with minor drugs (e.g., marijuana) and alcohol
- I. Minor psychological or physical concerns
 - 1. Non-debilitating fears
 - 2. Weight problem and height
 - 3. Failure to take responsibility for oneself
 - 4. Personality characteristics such as trust, immaturity, spontaneity,, impulsivity, honesty, defensiveness and warmth
- J. Mild emotional states
 - 1. General likes and dislikes
- K. Narration of events and experiences that include oneself with affect

III. Highly Intimate Self-Disclosure (tends to be self-referential in nature)

- A. Sexual habits and preferences (real or imaginary)
 - 1. Sexual dreams
- B. Major disappointments or regrets
 - 1. Discussion of crises in ones life (past or present)
 - 2. Description of counseling or therapy experience (real or contemplated)
 - 3. Shame
- C. Admission of serious difficulties (past or present in the expression or control of behaviour)
 - 1. Addictions (e.g., excessive use of drugs or alcohol; discussion of habitual use)
 - 2. Physical aggression (given or received)
 - 3. Abortion
- D. Important and/or detailed anomalies (physical or psychological)
 - 1. Discussion of previous psychiatric disorder of respondent or significant others
 - 2. False limbs, glass eyes, toupees, etc.
 - 3. Serious diseases (current)
- E. Important feelings and behaviours (positive and negative) relating to:
 - 1. Marriage and family (parents, children, brothers and sisters and significant others—e.g., lovers)
 - 2. Reasons for marriage or divorce
 - 3. Extra-marital sexual relations or desire for same (actual or intended)

4. Discussion of parents' marriage
5. Confidential material told to or initiated by respondent
- F. Discussion of specific instances of intense emotion (directed toward self or others; in personal terms)
 1. Feelings of depression
 2. Love (if discussed specifically—otherwise, if used in abstract sense, rate II)
 3. Hate, bitterness and resentment
 4. Anger
 5. Elation
 6. Fulfillment
 7. Extreme fears
 8. Very strong personal desires (e.g., to be better liked)
 9. Jealousy
- G. Discussion of important hurt, loss, or discomfort caused or received by respondent (actual or anticipated)
- H. Deep sense of personal worth or inadequacy which significantly affects self-concept
 1. Include serious strengths and weaknesses in absolute or relative terms
 2. Rejection by significant others
- I. Admission of significant illegal, immoral, or antisocial acts or impulses of self or significant others
 1. Stealing
 2. Vandalism
 3. Important lies
- J. Details of important and meaningful relationships (i.e., why someone is your best friend; if significant other is discussed not in relation to oneself, use category I or II)